

WS48M- X X X X XX

SWITCH FUNCTION CODE	SWITCH FUNCTION DESCRIPTION
1	MECHANICAL,MOMENTARY,SOLDER TERMINAL
2	MECHANICAL,MAINTAINED,SOLDER TERMINAL
5	MECHANICAL,MOMENTARY, P.C. TERMINAL
6	MECHANICAL,MAINTAINED, P.C. TERMINAL
A	MACHANICAL, MOMENTARY, WIRELEADS
B	MACHANICAL, MAINATINED, WIRELEADS

HOUSING MATERIAL CODE	HOUSING DECSRIPTION
1	STAINLESS STEEL
2	ZINC ALLOY, CHROME PLATED

ILLU. TYPE CODE	ILLUMINATION TYPE DESCRIPTION
0	NON-ILLUMINATION
1	CENTER SPOT ILLUMINATION
2	RING ILLUMINATION
3	POWER/STANDBY SYMBOL ILLUMINATION

LED COLOR CODE	LED COLOR
N	NONE
A	AMBER
R	RED
Y	YELLOW
B	BLUE
G	GREEN
W	WHITE
RB	RED/BLUE
RG	RED/GREEN

LED INLET VOLTAGE CODE		LED INLET VOLTAGE
NON- WIRELEADS	IF BLANK*	(SEE NOTE)
	05	5V
WIRELEADS	IF BLANK*	(SEE NOTE)
	05	5V
	12	12V
	24	24V

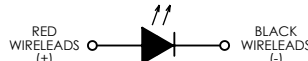
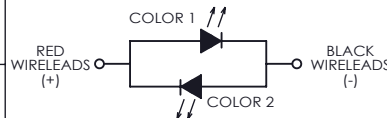
MECHANICAL CHARACTERISTICS:
 SWITCH CIRCUITRY: SPST-NO-DB (CONTACT FORM X)
 SWITCH ACTION: MOMENTARY AND MAINTAINED (PER CHART)
 BUTTON TRAVEL: 2.3mm [.090] NOMINAL
 OPERATING FORCE: 306g [3N] NOMINAL
 CONTACT BOUNCE: 1ms NOMINAL
 PANEL THICKNESS: 0.5 - 4.5mm [.020 - .177]
 CONTACTS: SILVER PLATED
 NUT TORQUE FORCE: 11.5 kgf-cm [MAX 10 LB-in]

ENVIRONMENTAL SPECIFICATIONS:
ACTUATOR INGRESS PROTECTION: IP67
OPERATING TEMPERATURE:
NON-ILLUMINATION TYPE: -40 C to +85 C [-40 F to +185 F]
ILLUMINATION TYPE: -40 C to +85 C [-40 F to +185 F]
MOMENTARY: -40 C to +85 C [-40 F to +185 F]
MAINTAINED: -40 C to +85 C [-40 F to +185 F]

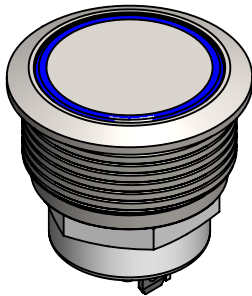
ELECTRICAL SPECIFICATIONS:
CURRENT RATING:
MOMENTARY: 10mA@12VDC, 100K CYCLES
MAINTAINED : 20K CYCLES NOMINAL
DIELECTRIC STRENGTH: 1,000VAC
INSULATION RESISTANCE: 1G OHM
CONTACT RESISTANCE:
50m OHMS MAX INITIAL(NON-WIRELEADS)
250m OHMS MAX INITIAL(WIRELEADS)

NOTE

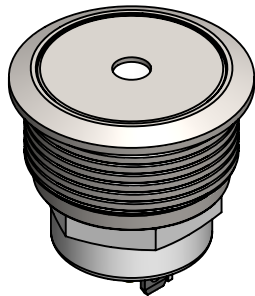
1. CURRENT LIMITING RESISTOR IS REQUIRED TO LIMIT LED FORWARD CURRENT TO 20mA
2. SUPPLY HEX NUT AND SEALING WASHER BULK PACKED.
3. INNER RESISTOR ONLY FOR LED :RED / BLUE / GREEN / WHITE.

LED SPECIFICATION					
LED CODE	LED SINGLE COLOR		Vf(VDC)	If (mA)	<div></div>
			TYP.		
R	RED		2.0	20	
A	AMBER		2.0	20	
Y	YELLOW		2.0	20	
G	GREEN		3.0	20	
B	BLUE		3.1	20	
W	WHITE		3.3	20	
LED CODE	BICOLOR LED		Vf(VDC)	If (mA)	<div></div>
	COLOR1	COLOR2	TYP.		
RB	RED	BLUE	2.0(RED) 3.3(BLUE)	20	
RG	RED	GREEN	2.0(RED) 3.4(GREEN)	20	
NOTE: Hand Soldering Temperature (4mm above from Body) : 320°C for 3 seconds					

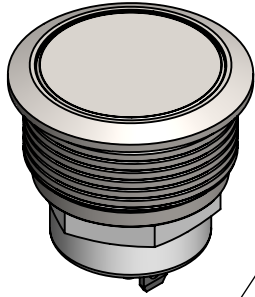
WIRELEADS SPECIFICATION					
WIRELEADS TYPE	WIRELEADS SPECIFICATION	SW TERMINAL		LED	
		/	O	+	-
ILLUMINATION	AWG26 / UL1007	BLUE	BLUE	RED	BLACK
NON-ILLUMINATION		BLUE	BLUE	--	--



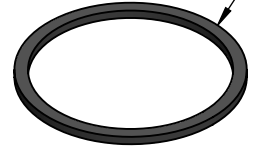
CENTER SPOT ILLUMINATION



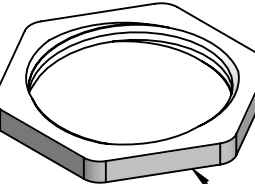
NON-ILLUMINATION TYPE





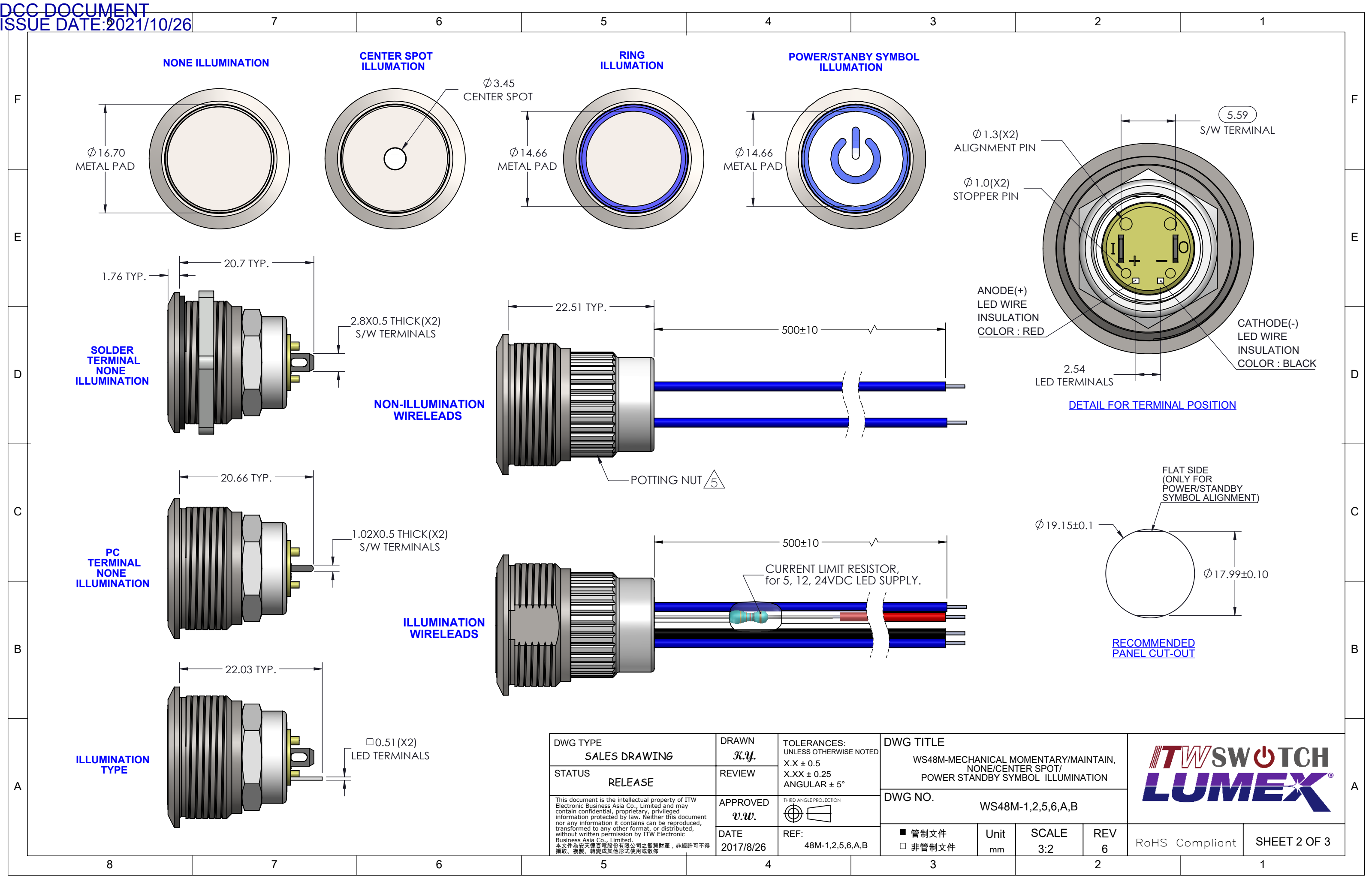
SEALING WASHER
T=0.8
(SUPPLIED IN BULK)



SPECIAL HEX NUT
HEX 22.1, M19*P1.0
T=2.2
(SUPPLIED IN BULK)



DWG TYPE SALES DRAWING	DRAWN K.Y.	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5		DWG TITLE WS48M-MECHANICAL MOMENTARY/MAINTAIN, NONE/CENTER SPOT/ POWER STANDBY SYMBOL ILLUMINATION					
STATUS RELEASE	REVIEW	X.XX ± 0.25 ANGULAR ± 5°		DWG NO. WS48M-1,2,5,6,A,B					
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	DATE 2017/8/26	REF: 48M-1,2,5,6,A,B	<input checked="" type="checkbox"/> 管制文件 <input type="checkbox"/> 非管制文件	Unit mm	SCALE 3:2	REV 6	RoHS Compliant	SHEET 1 OF 3	





SWITCH FUNCTION CODE	SWITCH FUNCTION DESCRIPTION
A	MACHANICAL, MOMENTARY, WIRELEADS
B	MACHANICAL, MAINATINED, WIRELEADS

HOUSING MATERIAL CODE	HOUSING DESCRIPTION
1	STAINLESS STEEL
2	ZINC ALLOY, CHROME PLATED
3	AL ALLOY, ANODIZED BLACK

ILLU. TYPE CODE	ILLUMINATION TYPE DESCRIPTION
0	NON-ILLUMINATION
1	CENTER SPOT ILLUMINATION
2	RING ILLUMINATION
3	POWER/STANDBY SYMBOL ILLUMINATION

LED COLOR CODE	LED COLOR
N	NONE
A	AMBER
R	RED
Y	YELLOW
B	BLUE
G	GREEN
W	WHITE
RB	RED/BLUE
RG	RED/GREEN

LED INLET VOLTAGE CODE		LED INLET VOLTAGE
NON-WIRELEADS	IF BLANK*	(SEE NOTE)
	05	5V
WIRELEADS	IF BLANK*	(SEE NOTE)
	05	5V
	12	12V
	24	24V

ACCESSORIES CODE	ACCESSORIES
A3	ADD PVC COVER OVER THE WIRE-LEADS


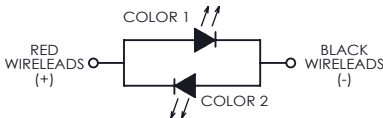
MECHANICAL CHARACTERISTICS:
 SWITCH CIRCUITRY: SPST-NO-DB (CONTACT FORM X)
 SWITCH ACTION: MOMENTARY AND MAINTAINED (PER CHART)
 BUTTON TRAVEL: 2.3mm [.090] NOMINAL
 OPERATING FORCE: 306g [3N] NOMINAL
 CONTACT BOUNCE: 1ms NOMINAL
 PANEL THICKNESS: 0.5 - 4.5mm [.020 - .177]
 CONTACTS: SILVER PLATED
 NUT TORQUE FORCE: 11.5 kgf-cm [MAX 10 LB-in]

ENVIRONMENTAL SPECIFICATIONS:
ACTUATOR INGRESS PROTECTION: IP67
OPERATING TEMPERATURE:
NON-ILLUMINATION TYPE: -40 C to +85 C [-40 F to +185 F]
ILLUMINATION TYPE: -40 C to +85 C [-40 F to +185 F]
MOMENTARY: -40 C to +85 C [-40 F to +185 F]
MAINTAINED: -40 C to +85 C [-40 F to +185 F]

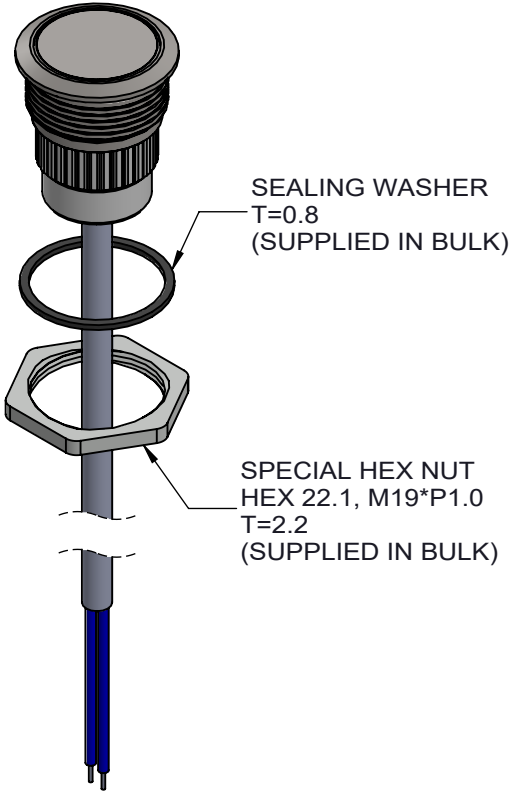
ELECTRICAL SPECIFICATIONS:
CURRENT RATING:
MOMENTARY: 10mA@12VDC, 100K CYCLES
MAINTAINED : 20K CYCLES NOMINAL
DIELECTRIC STRENGTH: 1,000VAC
INSULATION RESISTANCE: 1G OHM
CONTACT RESISTANCE:
50m OHMS MAX INITIAL(NON-WIRELEADS)
250m OHMS MAX INITIAL(WIRELEADS)

NOTE

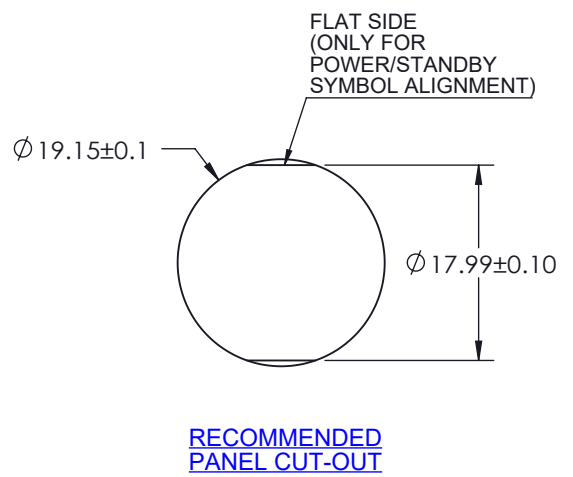
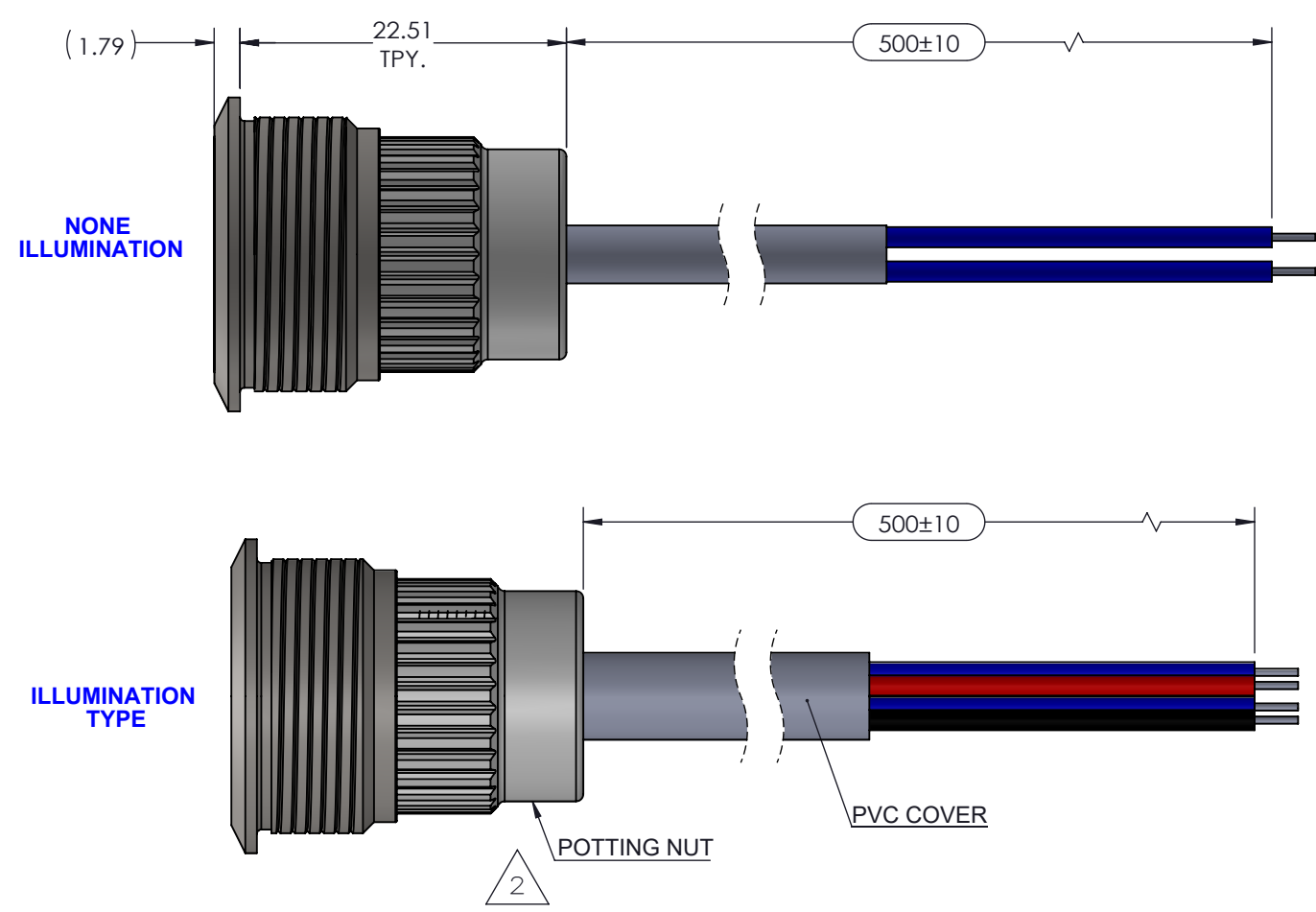
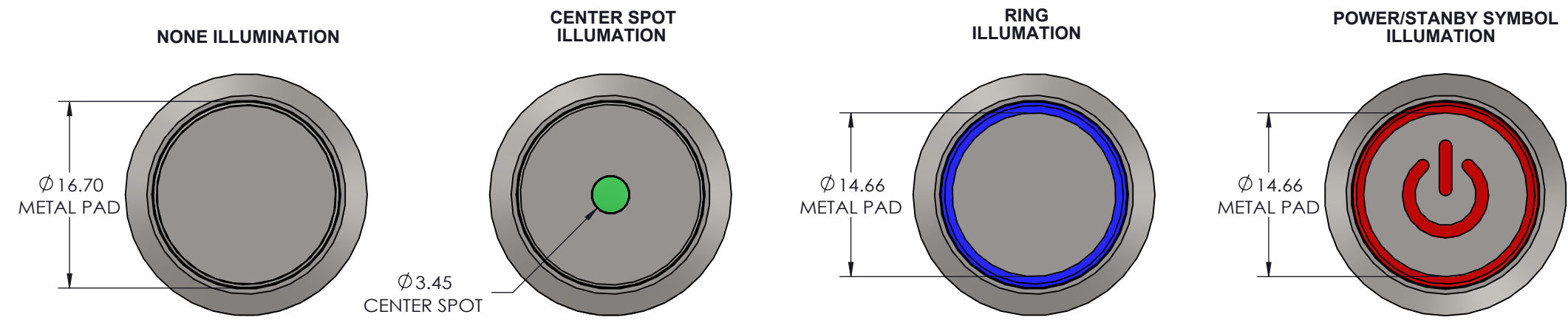
1. CURRENT LIMITING RESISTOR IS REQUIRED TO LIMIT LED FORWARD CURRENT TO 20mA
2. SUPPLY HEX NUT AND SEALING WASHER BULK PACKED.
3. INNER RESISTOR ONLY FOR LED :RED / BLUE / GREEN / WHITE.




LED SPECIFICATION					
LED CODE	LED SINGLE COLOR		Vf(VDC)	If (mA)	CIRCUITRY 
			TYP.		
R	RED		2.0	20	
A	AMBER		2.0	20	
Y	YELLOW		2.0	20	
G	GREEN		3.0	20	
B	BLUE		3.1	20	
W	WHITE		3.3	20	
LED CODE	BICOLOR LED		Vf(VDC)	If (mA)	CIRCUITRY
	COLOR1	COLOR2	TYP.		
RB	RED	BLUE	2.0(RED) 3.3(BLUE)	20	
RG	RED	GREEN	2.0(RED) 3.4(GREEN)	20	
NOTE: Hand Soldering Temperature (4mm above from Body) : 320°C for 3 seconds					

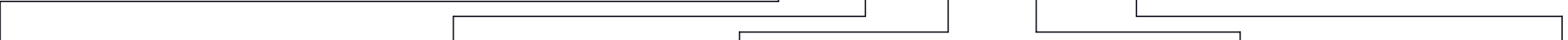
WIRELEADS SPECIFICATION					
WIRELEADS TYPE	WIRELEADS SPECIFICATION	SW TERMINAL		LED	
		/	O	+	-
ILLUMINATION	AWG26 / UL1007	BLUE	BLUE	RED	BLACK
NON-ILLUMINATION		BLUE	BLUE	--	--



DWG TYPE SALES DRAWING	DRAWN K.Y.	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5		DWG TITLE WS48M-MECHANICAL MOMENTARY/MAINTAINED, WIRELEADS WITH PVC COVER, NONE/CENTER SPOT/RING/POWER-STANDBY ILLUMINATION							
STATUS RELEASE	REVIEW	X.XX ± 0.25 ANGULAR ±5°		DWG NO. WS48M-A,B-A3							
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	DATE 2017/8/26	REF: S48M-1,2,5,6,A,B			<input checked="" type="checkbox"/> 管制文件 <input type="checkbox"/> 非管制文件		Unit mm				
								RoHS Compliant		SHEET 1 OF 3	



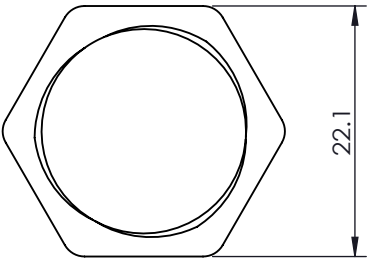
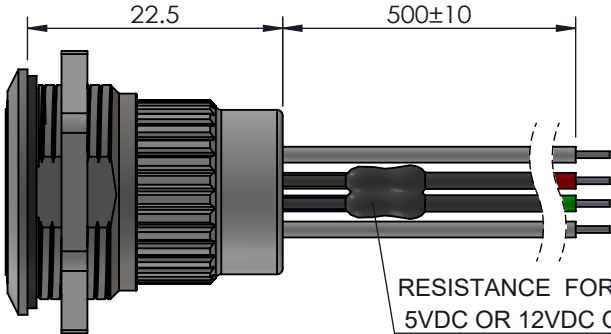
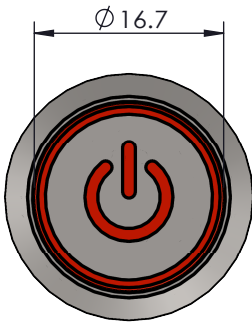
DWG TYPE SALES DRAWING	DRAWN K.Y.	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5 X.XX ± 0.25 ANGULAR ±5°		DWG TITLE WS48M-MECHANICAL MOMENTARY/MAINTAINED, WIRELEADS WITH PVC COVER, NONE/CENTER SPOT/RING/POWER-STANDBY ILLUMINATION					
STATUS RELEASE	REVIEW			DWG NO. WS48M-A,B-A3					
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	DATE 2017/8/26	REF: S48M-1,2,5,6,A,B			<div>■ 管制文件 □ 非管制文件</div>	Unit mm			




LED INLET VOLTAGE CODE	LED INLET VOLTAGE
IF BLANK*	(SEE NOTE)
05	5V
12	12V
24	24V

NOTE

1. CURRENT LIMITING RESISTOR IS REQUIRED TO LIMIT LED FORWARD CURRENT TO 20mA
2. SUPPLY HEX NUT AND SEALING WASHER BULK PACKED.



DWG TYPE SALES DRAWING	DRAWN <i>K.Y.</i>	TOLERANCES: UNLESS OTHERWISE NOTED X.X ± 0.5 X.XX ± 0.25 ANGULAR ± 5°	DWG TITLE WS48M-MECHANICAL MOMENTARY/MAINTAIN, RGB ILLUMINATION			
STATUS RELEASE	REVIEW <i>J.S.</i>		DWG NO. WS48M-A,B-RGB			
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	DATE 2022/2/18	REF: 48M-1,2,5,6,A,B	<div> <div>■ 管制文件</div> <div>□ 非管制文件</div> </div>	Unit mm	SCALE 3:2	REV 1



REVISION RECORD

REV.	DESCRIPTION	DATE	DRAWN BY	DOCUMENT NO.
1	RELEASE FOR PRODUCTION	2022/02/18	K.Y./T.S.	DCN-202200015

DWG TYPE SALES DRAWING	DRAWN <i>K.Y.</i>	TOLERANCES: UNLESS OTHERWISE NOTED		DWG TITLE WS48M-MECHANICAL MOMENTARY/MAINTAIN, RGB ILLUMINATION				
STATUS RELEASE	REVIEW <i>J.S.</i>	X.X ± 0.5 X.XX ± 0.25 ANGULAR ± 5°						
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	DATE 2022/2/18	REF: 48M-1.2.5.6.A.B	<input checked="" type="checkbox"/> 管制文件 <input type="checkbox"/> 非管制文件	Unit mm	SCALE 3:2			REV 1